This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A method of producing at least two nanoporous carbide-derived carbon compositions whose mean diameter differs by in the range of 0.05 nm to about 0.2 nm comprising

(a) reacting a first quantity of a carbide composition with a halogen at a first temperature in the range of about 200°C to about 1400°C, to produce nanopores in a first quantity of carbide-derived carbon characterized as having a nanopore size distribution having a full width at half maximum of less than 100% of its mean pore diameter;

(b) reacting a second quantity of the carbide composition with the halogen at a second temperature in the range of from about 200°C to about 1400°C, said second temperature differing from said first temperature, to produce nanopores in a second quantity of carbide-derived carbon characterized as having a nanopore size distribution and a mean nanopore diameter that differs by in the range of 0.05 nm to about 0.2 nm than the mean pore diameter of the first quantity.

2. (Original) The method of claim 1 wherein the carbide is Ti_3SiC_2.

3. (Canceled).

4. (Previously presented) The method of claim 1 wherein the at least one of the first and second temperatures is in the range of from about 300°C to about 1200°C.

5. (Previously presented) The method of claim 1 wherein at least one of the first and second temperatures is in the range of from about 300°C to about 800°C.

6. (Previously presented) The method of claim 1 wherein the difference between the first and second mean nanopore diameter is about 0.05 nm.

7. (Canceled).

8. (Previously presented) The method of claim 1 wherein the nanopore size distribution of the second quantity of carbide-derived carbon is substantially the same as the nanopore size distribution of the first quantity of carbide-derived carbon.

9. (Previously presented) The method of claim 1 wherein the difference between the first and second mean pore diameter is about 0.1 nm.

10. (Previously presented) The method of claim 1 wherein the carbide composition comprises a carbide of B, Mo, Si, Ti, Ta, Mo, or a mixture thereof.

11. (Previously presented) The method of claim 1 wherein the halogen comprises chlorine.

12. (Previously presented) The method of claim 1 wherein the mean nanopore size diameter of at least one of the carbide-derived carbons is less than about 2 nm.

13. (Previously presented) The method of claim 1 wherein the mean nanopore size diameter of at least one of the carbide-derived carbons is less than about 1 nm.

14. (Previously presented) The method of claim 11 wherein the nanopore size distribution of at least one of the carbide-derived carbons has a full width at half maximum of less than about 0.5 nanometers.

15. (Currently amended) The method of claim 1, further comprising reacting at least one additional quantity of the carbide composition with the halogen at a third temperature in the range of from about 200°C to about 1400°C, said third temperature differing from said first and second temperatures to produce a nanoporous composition characterized as having a mean pore diameter that differs by in the range of 0.05 nm to about 0.2 nm than the mean pore diameter of the first quantity or the second quantity.

16. (Currently amended) A method of manufacturing a nanoporous carbon composition with a predetermined mean nanopore size comprising:

a) reacting two or more carbide calibration quantities, each of the same initial composition and form, with halogen gas at two or more different fixed reaction temperatures for times sufficient to provide a two or more nanoporous carbide-derived carbon calibration compositions, wherein each fixed temperature is in the range of from about 200°C to about 1400°C;

b) measuring the mean nanopore sizes of the resulting nanoporous carbide-derived carbon calibration compositions;

c) correlating the measured nanopore sizes of the resulting nanoporous carbide-derived carbon calibration compositions with the corresponding fixed times and reaction temperatures;

d) identifying the time and temperature corresponding to the predetermined range of nanopore sizes; and

e) reacting a manufacturing quantity of the carbide with the halogen at the time and temperature conditions identified as corresponding to the predetermined ~~range of~~ nanopore ~~sizes~~ size, such that the mean nanopore size is within 0.2 nm of the predetermined mean value.